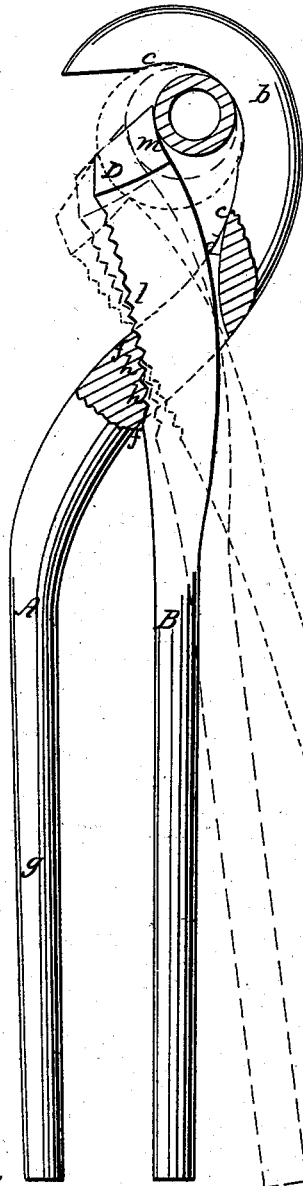


*Patented Aug 15, 1865*



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ANDREW B. LIPSEY, OF NEW YORK, N. Y.

## IMPROVEMENT IN GAS-FITTERS' TONGS.

Specification forming part of Letters Patent No. 49,424, dated August 15, 1865.

*To all whom it may concern:*

Be it known that I, ANDREW B. LIPSEY, of the city, county, and State of New York, have invented a new and Improved Gas-Fitter's Clamp or Wrench; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable those skilled in the art to make and use the same, reference being had to the accompanying drawings, forming part of this specification.

The wrenches heretofore used by gas-fitters, or "clamps," as they are most commonly termed by them, have been of such a character and construction that much time was necessarily required to adjust or arrange them for the varying sizes of pipes, and with many of them there were no means provided for thus adjusting them, it being necessary to have a separate and distinct clamp or wrench for each size, no matter how small the variations, and, moreover, in most of the others, even though arranged to accommodate the most general and common sizes, were necessarily so extremely bulky and cumbersome as to render them very inconvenient and disagreeable to use.

To provide a gas-fitter's clamp adaptable to all sizes of pipe, whether large or small, within any reasonable limits, and with facility, ease, and quickness, is the principal object of the present invention, and is accomplished thereby, it consisting in forming the clamp of two shafts, one of which has its outer end made of a hook or circular shape, at a short distance from and between which and the handle portion or end of the same is a short slot extending in the direction of its length, having its end toward the handle serrated or made of a toothed shape, in and through which slot the other shaft is inserted, made of such a thickness and width as to be freely moved forward and backward therein, and having its edge which comes in contact with the teeth of the slot correspondingly toothed or serrated, so that, first having placed the hook-shaped end about and around the pipe upon which it is intended to operate, and then having adjusted the outer end of the other shaft so as to bear against said pipe, by simply grasping the handle ends of the two shafts either with one or both hands, and moving them toward each other, the outer end of the adjustable shaft can be made to bear against the pipe with sufficient pressure to tightly hold

and grasp the same between it and the hooked end of the other shaft, the interlocking of its teeth with the teeth of the slot preventing it from slipping, and serving also as a fulcrum for the same to turn upon.

In accompanying plate of drawings my improvement is illustrated, the figure being a side view of the clamp, with a portion of the same broken away so as to show the mode in which its shafts are arranged together, and with the position of the adjustable shaft when operating upon pipes of different diameters.

A and B in the drawings represent the two shafts composing the clamp, one of which, A, has its outer end, *a*, bent around and into a circular or hook shape, *b*, with its inner edge, *c*, of the form of a circle, or nearly so.

*d* is a short rectangular slot made in the shaft A at a short distance from its hook end *b*, and in the direction of its length, the end *f* of which slot toward the handle portion or end *g* of the shaft has a series of teeth or serrations, *h h*. In and through the slot *d* of the shaft A the other shaft, B, is inserted, made of such a width and thickness as to freely play therein, and extending across the opening of the hook *b* of the shaft A, the edge *l* of which shaft B in contact with the toothed end of the slot being correspondingly toothed or serrated for a portion of its length.

The hook end of the shaft A is first placed around and about the pipe to be operated upon, and then the other or movable shaft is moved in or out of its guiding-slot *d*, according as is necessary to bring its outer end, *m*, against the said pipe, when the handles of the two shafts are grasped, either in one or both hands, and brought or swung toward each other sufficiently to cause the pipe to be bound and tightly held between the outer ends of the two shafts between which the pipe had been previously placed, as above described, so that it can be turned at pleasure, the teeth of the shaft B, by engaging with the teeth of the slot, preventing it from slipping, as well as serving as a fulcrum for the shaft to turn upon, as is evident without further description.

By partially releasing the grasp of the hand upon the shafts their gripe upon the pipe can be sufficiently diminished to allow the clamp to be swung around upon it, when, it being again tightened, the clamp seizes and holds the pipe

with sufficient pressure to enable it to be turned, as before described, the important advantage of which is manifest to all conversant with the fitting of gas-pipes, especially if it can be accomplished without necessitating the use of both hands, which it is perfectly self-evident is so secured by my improved gas-fitter's clamp above described.

If desired or deemed necessary, the contact edges or surfaces of the two shafts with the pipes can be made sufficiently roughened or serrated to prevent all possibility of their slipping upon the pipes when in use.

From the above description it is manifest that my improved clamp can be readily, easily, and quickly adjusted to all sizes of gas-pipes, either large or small, within reasonable limits, and that the tightness of their grasp or hold upon one and all is the same, the advantages of which are many and obvious to all conversant with clamps used for a similar purpose.

To prevent the adjustable shaft B, as it is moved in or out of the guiding-slot for the same in the other shaft, A, from possibly escaping therefrom, except when so desired—in which

case it is drawn out by its outer end—I form upon or attach to its outer end and on each side thereof a shoulder-piece, *o*, of sufficient width and thickness therefor.

Although I have described my new and improved clamp as especially adapted for gas-fitting, it may be as well applied to other and various purposes without in any essential particular varying its construction, or at least its mode of operation, and therefore I do not intend to limit myself to any special employment of it.

I claim as new and desire to secure by Letters Patent—

The clamp or wrench herein described, especially adapted for gas-fitting purposes, the same consisting in the combination of two shafts, constructed, arranged, and operating together substantially in the manner specified.

The above specification of my invention signed by me this 9th day of June, 1865.

ANDREW B. LIPSEY.

Witnesses:

M. M. LIVINGSTON,  
ALBERT W. BROWN.